

REMARKS/ARGUMENTS

In response to the Office Action dated January 13, 2004, claim 17 is amended and claim 18 is added. Claims 1-5, 17 and 18 are now active in this application. No new matter has been added.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-5 and 17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

With regard to claim 17, the Examiner maintains that claim 17 is directed to Figure 8, not Figure 1 as Applicants contend, and not be generic to both Figures 1 and 8.

With regard to claims 1-5, the Examiner asserts that "It is not clear how the computer can solve an equation with two unknowns".

The rejections are respectfully traversed.

As a first issue, claim 17 is amended to delete the expression "at least one of" in:

a calculation means for calculating a chip temperature of said power transistor, based upon at least one of said current detected by said current detection means and said voltage detected by said voltage detection means.

This amendment to claim 17 is made to provide better form and clarity.

The calculation means according to claim. 17 for calculating a chip temperature of said power transistor based upon said current detected by said current detection means and said voltage detected by said voltage detection means is NOT readable on Figure 8, as now asserted

by the Examiner, but is readable on Figure 1, as previously asserted by Applicants. The recitation in claim 17 of:

a voltage detection means for detecting a voltage between a drive signal input terminal and a current supply terminal of said power transistor...

is not readable on Figure 8, but is readable on Figure 1. The reason being is that, in Figure 8, *the voltage between a base and an emitter of the mirror transistor* is detected, not *the voltage between a drive signal input terminal and a current supply terminal of the power transistor*.

As to claims 1-5, Applicants wish to point out that the saturation current I_{se} in Equation (1), is NOT an unknown, as maintained by the Examiner. As explained at page 10, lines 14 through 18 of the present specification, the saturation current I_{se} can be described as a function of temperature, i.e. $I_{se}=f(T)$. Since, for example, the saturation current I_{se} is measured and stored as a function of temperature for each type of chip during manufacture before using the Equation 1, the saturation current I_{se} is NOT an unknown when using the Equation 1.

Therefore, if the collector current I_c and the voltage V_{be} between the base and the emitter are once obtained, the chip temperature can be calculated with Equation 1.

In view of the above, it is believed clear that claims 1-5 and 17 recite the invention with the degree of precision and particularity required by the statute. Therefore, it is respectfully urged that the rejection of claims 1-5 and under 35 U.S.C. §112, second paragraph, be withdrawn.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 1-5 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement; i.e., the claims contain subject matter which was not described in the

specification in such a way as to enable any person skilled in the art to which it (the invention) pertains, or with which it is most nearly connected, to make and use the invention.

The Examiner asserts that Equation 1 of Applicants' specification has two unknowns (I_{se} and T) and only one equation is presented. Thus, it is not clear how the computer solves Equation 1 to obtain a value of T .

The rejections are respectfully traverse.

As noted above, since, for example, the saturation current I_{se} is measured and stored as a function of temperature for each type of chip during manufacture before using the Equation 1, the saturation current I_{se} is NOT an unknown when using the Equation 1. Therefore, if the collector current I_c and the voltage V_{be} between the base and the emitter are once obtained, the chip temperature can be calculated with Equation 1.

In view of the above, it is believed clear that the claims contain subject matter which was described in the specification in such a way as to enable any person skilled in the art to which it (the invention) pertains, or with which it is most nearly connected, to make and use the invention. Therefore, it is respectfully urged that the rejection of claims 1-5 under 35 U.S.C. §112, first paragraph, be withdrawn.

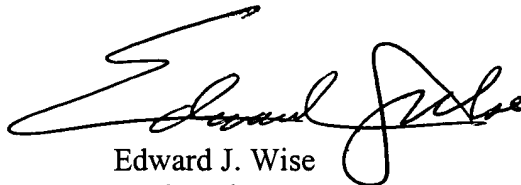
CONCLUSION

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Edward J. Wise", is written over a horizontal line.

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